

104th Purdue School Streetcar versus BRT

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Agenda

1. What is BRT and Streetcar?
2. Why develop a Streetcar or BRT system?
3. Where to develop BRT or Streetcar systems?
4. How do these projects go from Vision to Reality?
5. Questions



What - Streetcars

- Modern/Electric
- Fixed-rail
- Typically mixed-traffic
- Short trip connector
- Development catalyst
- Systems
 - 11 open
 - 2 opening
 - 8 extensions/new projects in CIG



What – Bus Rapid Transit (BRT)

- Modern/Electric
- Fixed-route
- Majority dedicated lanes
- Longer trip provider (freeway/arterial)
- Systems in U.S.
 - Dozens+ open
 - 20 projects in CIG



What – Differences & Commonalities

■ Differences

1. BRT initiated by transit agencies
2. Streetcar typically in mixed-traffic
3. BRT typically much longer routes
4. Streetcar users are typically initiated by walk based trips. BRT has a greater distribution of transit or auto based trips.
5. BRT has a less direct impact on catalyzing new development

■ Commonalities

1. Relatively robust service
 - 10 – 20 min. frequency
 - Hours of operation – 7 days a week
 - Extended hours – early mornings to late evenings
2. Enhanced station platforms
 - Level boarding, real-time, off-board collection
3. Alternative mobility choice
4. Drive economic investments

What - Costs

■ Capital Costs

- **BRT**
 - 20 projects in CIG
 - 11.71 mile route
 - \$76M avg. project cost
 - \$6.10M per route mile
- **Streetcar**
 - 8 projects in CIG
 - 3.03 mile route
 - \$217M avg. project cost
 - \$71.64M per route mile
- **LRT**
 - 12 projects in CIG
 - 10.38 mile route
 - \$1.774B avg. project cost
 - \$177.4M per route mile



■ Operating Costs

- **BRT**
 - \$100 - \$200 per revenue hour
- **Streetcar**
 - \$175 - \$250 per revenue hour
- **LRT**
 - \$250 - \$400 per revenue hour

Why - Establish Purpose & Need

- What problem is being solved?
- What customer is the system serving?
- How to best serve the needs of those customers?
- Origins and Destinations?
 - Activity generators
 - Bookends
- Other goals?
 - Mobility improvements
 - Economic development



Why - Trip Type

■ Walk

- Densities/Auto usage
- Attractions

■ Transit

- Connections to existing service?
 - Transit center
 - Local service
 - Express Bus/BRT
 - Amtrak/Regional Rail

■ Park and Ride

- Kiss and drop
- Surface lots
- Mixed-use



Why - Trip Purpose

- Services
 - Convenience
 - Entertainment
- Work
 - AM/PM commute trips
- Visitor



Why - Common BRT Project Goals

- Travel time savings
- Enhanced transit reliability
- Congestion mitigation
- Increased ridership
- Greater efficiency of resources
- Improved access to jobs



Why - Common Streetcar Project Goals

- Economic Development
- Greater productivity in land
- Improve downtown or a region's attractiveness
- Last mile connector/Modal link
- Pedestrian accelerator



Where - Activity Generators

Housing

- High density 15 units per acre+
- Transit dependent
- 0-1 vehicle households

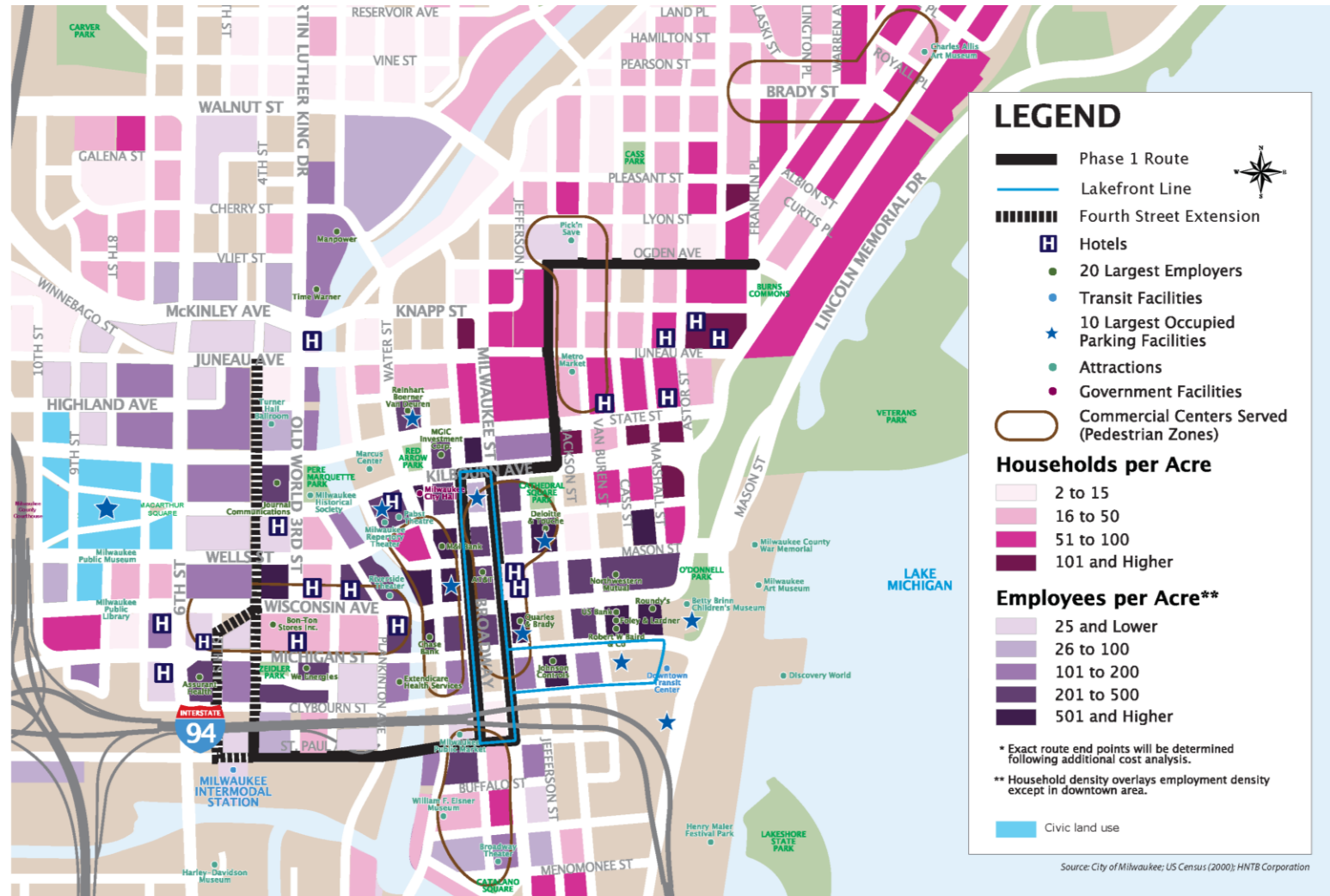
Employment Centers

- 25 jobs per acre+
- Health campuses

Attractions

- Sports facilities
- Zoo's
- Museum's
- Parks/festival grounds

Hotel clusters



How – Project Implementation

■ BRT

- Transit Agency
- Typically Capital Improvement Grant Program – Small Starts
- Capital Funds – match from existing or new transit agency funds (bonding)
- Operating Revenues - existing or new transit agency funds (sales tax)

■ Streetcar

- City Government with Transit Agency or Non-Profit
- More frequently now through Capital Improvement Grant Program – Small Starts
- Capital Funds – match from value capture/tax increment financing (bonding)
- Operating Revenues – transit agencies funds, parking funds, value capture

Questions?

- BRT



- Streetcar

